

Modifying an image

1. Running /bin/bash

```
C:\Users\JervinJosh>docker run -it ubuntu:16.04 /bin/bash
root@e563b5233944:/#
```

2. Trying ping in bash

```
root@e563b5233944:/# ping google.com
bash: ping: command not found
```

3. Updating software list to prepare for installation

```
root@aec9e1bb891f:/# apt-get update
Get:1 http://archive.ubuntu.com/ubuntu xenial InRelease [247 kB]
Get:2 http://security.ubuntu.com/ubuntu xenial-security InRelease [109 kB]
Get:3 http://archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:4 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages [2051 kB]
Get:5 http://archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Get:6 http://archive.ubuntu.com/ubuntu xenial/main amd64 Packages [1558 kB]
Get:7 http://archive.ubuntu.com/ubuntu xenial/restricted amd64 Packages [14.1 kB]
Get:8 http://archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [9827 kB]
Get:9 http://security.ubuntu.com/ubuntu xenial-security/restricted amd64 Packages [15.9 kB]
Get:10 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 Packages [984 kB]
Get:11 http://security.ubuntu.com/ubuntu xenial-security/multiverse amd64 Packages [8820 B]
Get:12 http://archive.ubuntu.com/ubuntu xenial/multiverse amd64 Packages [176 kB]
Get:13 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [2559 kB]
Get:14 http://archive.ubuntu.com/ubuntu xenial-updates/restricted amd64 Packages [16.4 kB]
Get:15 http://archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [1544 kB]
Get:16 http://archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 Packages [26.2 kB]
Get:17 http://archive.ubuntu.com/ubuntu xenial-backports/main amd64 Packages [10.9 kB]
Get:18 http://archive.ubuntu.com/ubuntu xenial-backports/universe amd64 Packages [12.7 kB]
Fetched 19.4 MB in 1min 4s (302 kB/s)
Reading package lists... Done
```

4. Installing ping

```
root@e563b5233944:/# apt-get install iputils-ping
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libffi6 libgmp10 libgnutls-openssl127 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
Suggested packages:
  gnutls-bin
The following NEW packages will be installed:
  iputils-ping libffi6 libgmp10 libgnutls-openssl127 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
0 upgraded, 10 newly installed, 0 to remove and 5 not upgraded.
Need to get 1307 kB of archives.
After this operation, 3781 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
```

5. Using ping

```
root@e563b5233944:/# ping google.com
PING google.com (172.217.31.238) 56(84) bytes of data.
64 bytes from 172.217.31.238: icmp_seq=1 ttl=37 time=28.1 ms
64 bytes from 172.217.31.238: icmp_seq=2 ttl=37 time=24.1 ms
64 bytes from 172.217.31.238: icmp_seq=3 ttl=37 time=24.5 ms
64 bytes from 172.217.31.238: icmp_seq=4 ttl=37 time=25.4 ms
64 bytes from 172.217.31.238: icmp_seq=5 ttl=37 time=24.7 ms
64 bytes from 172.217.31.238: icmp_seq=6 ttl=37 time=24.9 ms
64 bytes from 172.217.31.238: icmp_seq=7 ttl=37 time=24.4 ms
64 bytes from 172.217.31.238: icmp_seq=8 ttl=37 time=24.5 ms
64 bytes from 172.217.31.238: icmp_seq=9 ttl=37 time=24.4 ms
64 bytes from 172.217.31.238: icmp_seq=10 ttl=37 time=24.9 ms
64 bytes from 172.217.31.238: icmp_seq=11 ttl=37 time=24.6 ms
64 bytes from 172.217.31.238: icmp_seq=12 ttl=37 time=24.3 ms
64 bytes from 172.217.31.238: icmp_seq=13 ttl=37 time=25.2 ms
64 bytes from 172.217.31.238: icmp_seq=14 ttl=37 time=25.2 ms
64 bytes from 172.217.31.238: icmp_seq=15 ttl=37 time=24.6 ms
64 bytes from 172.217.31.238: icmp_seq=16 ttl=37 time=24.1 ms
^C
--- google.com ping statistics ---
16 packets transmitted, 16 received, 0% packet loss, time 15023ms
rtt min/avg/max/mdev = 24.175/24.920/28.100/0.916 ms
```

Committing Changes

1. Finding the container

```
C:\Users\JervinJosh>docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS   NAMES
e563b5233944   ubuntu:16.04   "/bin/bash"             29 minutes ago Exited (0) 3 seconds ago          jolly_dirac
```

2. Committing a new image

```
C:\Users\JervinJosh>docker commit -a "Jervin Valencia" -m "Added ping utility." e56 jervinjosh68/ping
sha256:edfa8f75adb26c47fadaf7e16f495ca214746026833dc762fae51d22ffdfb65f
```

3. Using the image in a different container

```
C:\Users\JervinJosh>docker run -it jervinjosh68/ping /bin/bash
root@1a8a031f1f3d:/# ping google.com
PING google.com (142.250.207.78) 56(84) bytes of data.
64 bytes from 142.250.207.78: icmp_seq=1 ttl=37 time=36.3 ms
64 bytes from 142.250.207.78: icmp_seq=2 ttl=37 time=35.5 ms
64 bytes from 142.250.207.78: icmp_seq=3 ttl=37 time=35.5 ms
^C
--- google.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2003ms
rtt min/avg/max/mdev = 35.512/35.796/36.305/0.360 ms
```